Abstract

Watermark data is effectively placed in at least one of the bit positions, e.g., of the integer portion, of the average value of at least a selected one of the chrominance portions of up to each block, on up to a frame-by-frame basis. Values of the selected chrominance portion of individual pixels in a block may be adjusted if necessary in order to cause the resulting substitution of the selected bit of the average. The bit position replaced may be a function of the block's busyness. A "margin" value may also be added to the average value in order to better ensure that the bit of watermark data survives any MPEG encoding, while minimizing resulting artifacts. A receiver extracts the bit of watermark data from the selected bit position of the average value of the chrominance portion.